

The listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A multi-channel undulation induction accelerator of charged particles, comprising:

an injector block;

a drive source;

output systems;

turning systems;

an induction acceleration block, which is made in the form of at least two one-channel linear induction acceleration blocks (including those that are placed parallel with one to other), linked by means of the turning systems, each of which connects the output of one of the one-channel linear induction acceleration blocks with an input of another similar block, apart from those inputs which are connected with injectors, and those outputs from which accelerated particles are expressed; and

wherein:

at least one of the turning systems is made in the form of a sequence of fragments of solenoid, which are joined with each other in such a manner that they form a working channel for the charged particle beam, which accomplish a 180° or less angle turn, said sequence of solenoid fragments being positioned about said working channel.

Claim 2 (original): The multi-channel undulative induction accelerator of claim 2, in which:
at least one of the fragments of solenoid is made in the form of a straight solenoid.

Claim 3 (currently amended): The multi-channel undulative induction accelerator of claim 1, in which:

at least one of the fragments of solenoid is made in the form of a section of toroid[.]] ~~at least one of the fragments of solenoid is made in the form of a section of toroid.~~

Claim 4 (original): The multi-channel undulative induction accelerator of claim 1, in which:
at least one two-pole magnet system is placed in the space between the solenoids.

Claim 5 (new): The multi-channel undulative induction accelerator of claims 1 to 4, in which:

at least one of the turning system is made in the form of a system for merging together
at least two beams of charged particles into one joint beam.